

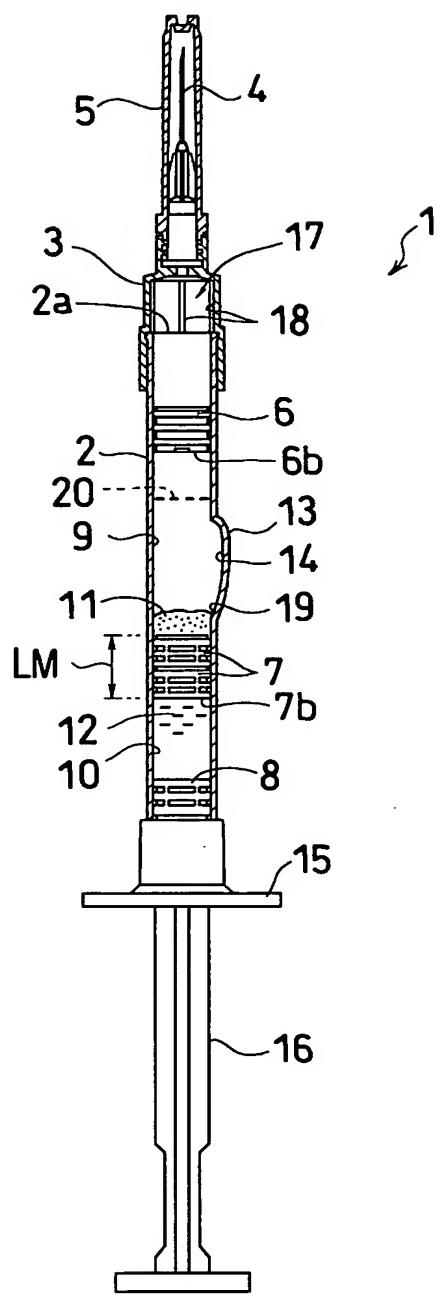
Fig. 1

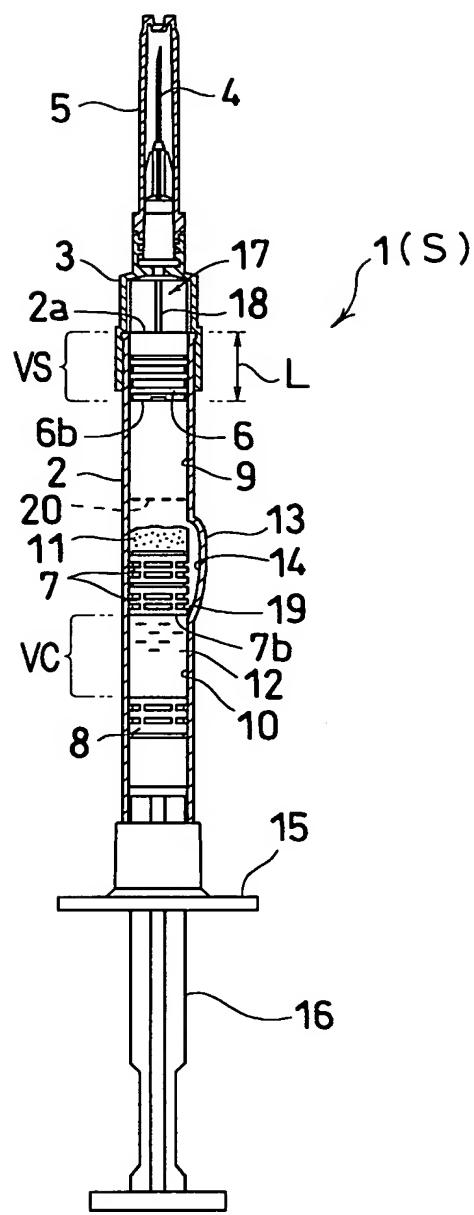
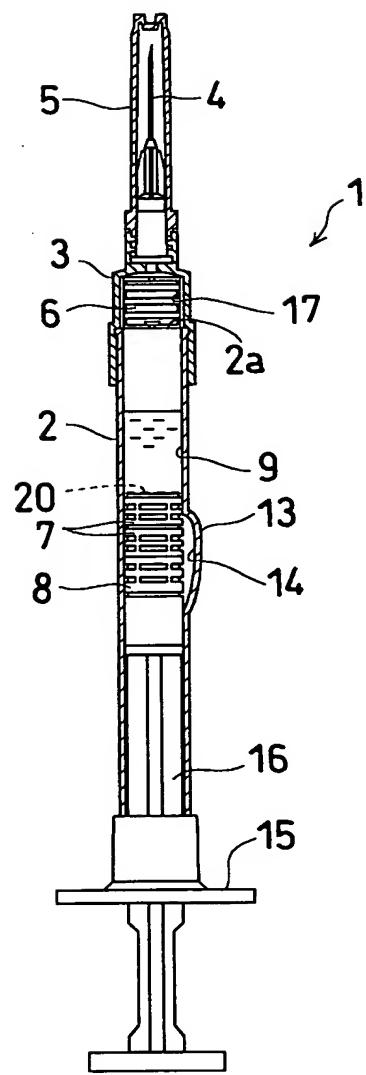
Fig. 2

Fig. 3



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Fig. 4

COMPARISON TABLE 1 : SHOWING BEHAVIOR OF SECOND COMPONENT WHEN CHANGING
POSITION FOR ATTACHING FRONT PLUG MEMBER

	CYLINDRICAL BODY	STATE BEFORE PREPARING OPERATION FOR ADMINISTRATION	MOVING DISTANCE TO BEGINNING STATE OF LIQUID TRANSFER	BEGINNING STATE OF LIQUID TRANSFER				LIQUID SPLASHING-OUT PHENOMENON	MOVING SPEED OF END PLUG MEMBER			
				INNER LENGTH (mm)	DISTANCE BETWEEN LEADING END OF CYLINDRICAL BODY AND REAR END OF FRONT PLUG MEMBER (mm)	END PLUG MEMBER (mm)	FRONT PLUG MEMBER (mm)	DISTANCE BETWEEN LEADING END OF CYLINDRICAL BODY AND REAR END OF FRONT PLUG MEMBER (mm)	REFERENCE VOLUME (mL)	VOLUME OF SECOND COMPONENT (mL)	VOLUME RATIO (%)	
EXAMPLE 1	10.5	95	22	17	12	10	10	0.87	1.10	79	◎	◎
EXAMPLE 2	10.5	95	27	17	14	13	13	1.13	1.10	102	◎	◎
COMPARISON EXAMPLE 1	10.5	95	17	17	13	4	4	0.35	1.10	31	◎	x
EXAMPLE 3	10.5	90	22	17	14	8	8	0.69	1.10	63	◎	○
EXAMPLE 4	10.5	90	27	17	15	12	12	1.04	1.10	94	◎	◎
COMPARISON EXAMPLE 2	10.5	90	17	17	12	5	5	0.43	1.10	39	◎	x
EXAMPLE 5	14.0	106	22	20	12	10	10	1.54	1.65	93	◎	◎
EXAMPLE 6	14.0	106	27	20	15	12	12	1.85	1.65	112	◎	◎
COMPARISON EXAMPLE 3	14.0	106	17	20	16	1	1	0.15	1.65	9	◎	x

EXPLANATION OF SYMBOLS

- ◎ : PERCENTAGE OF OCCURRENCE OF LIQUID SPLASHING-OUT 0%
- : PERCENTAGE OF OCCURRENCE OF LIQUID SPLASHING-OUT 10%
- x : PERCENTAGE OF OCCURRENCE OF LIQUID SPLASHING-OUT AT LEAST 30%

Fig. 5

COMPARISON TABLE 2 : SHOWING BEHAVIOR OF SECOND COMPONENT WHEN CHANGING POSITION WHERE BYPASS IS FORMED AND ENTIRE LENGTH OF MIDDLE PLUG MEMBER

CYLINDRICAL BODY	POSITION WHERE BYPASS IS FORMED	MIDDLE PLUG MEMBER	STATE BEFORE PREPARING OPERATION FOR ADMINISTRATION	MOVING DIATANCE TO BEGINNING STATE OF LIQUID TRANSFER	BEGINNING STATE OF LIQUID TRANSFER		LIQUID SPLASHING-OUT PHENOMON						
					DISTANCE BETWEEN LEADING END OF CYLINDRICAL BODY AND REAR END OF FRONT PLUG MEMBER (mm)	REFERENCE VOLUME (mL)							
EXAMPLE 3	10.5	90	49	12.0	22	17	14	8	0.69	1.10	63	◎	○
EXAMPLE 7	10.5	90	52	10.5	22	1.2	9	13	1.13	1.10	102	◎	◎
EXAMPLE 8	10.5	90	54	9.0	17	10	4	13	1.13	1.10	102	◎	◎
COMPARISON EXAMPLE 2	10.5	90	49	12.0	17	17	12	5	0.43	1.10	39	◎	x

EXPLANATION OF SYMBOLS

◎ : PERCENTAGE OF OCCURRENCE OF LIQUID SPLASHING-OUT 0%
 ○ : PERCENTAGE OF OCCURRENCE OF LIQUID SPLASHING-OUT 10%
 x : PERCENTAGE OF OCCURRENCE OF LIQUID SPLASHING-OUT AT LEAST 30%

Fig. 6

